Amendments to the Specification:

Please amend paragraphs [0007], [0008], [0010], [0013], [0032], [0033], and [0034] as set forth below:

[0007] Another prior art type face-taper contact tool holder uses a sleeve which is split such that it can flex circumferentially and therefore change diameter. The sleeve can thus stay in simultaneous contact with the tool holder shank and the spindle taper as the spindle taper diameter is ~~in~~ changing. However, the sleeve still cannot adapt to the changing taper angle, such that contact is still localized at either the front or rear of the taper. Also, friction limits the ability of the sleeve to always maintain solid contact between tool holder and taper, and some 'slop' is bound to exist, reducing tool holder stiffness. The split sleeve can also be prone to contamination problems since any material that is present between the sleeve and the tool holder shank will reduce the design's effectiveness, and sealing can be impractical.

[0008] Therefore, the prior art face-taper contact tool holders can provide an improvement over the standard tool holder, but they can also have varying limitations at high speeds, increased ~~in~~ mechanical complexity, and all require face contact.

[0010] According to the invention, a rotary tool holder for detachably retaining a rotary tool in the tapered bore of a spindle is provided wherein the tool holder comprises a shank with a tapered outer surface and front and rear contact portions. The shank also has a tapered outer surface corresponding to the tapered bore of the spindle, and a V-flange adjacent the front contact portion. In order to maintain contact with the tapered bore during rotation, a flexible circular cantilever portion can be provided adjacent the rear contact portion. The circular cantilever has a fixed end and a free end, wherein rotation of the rotary tool holder in the spindle bore results in the free end of the circular cantilever expanding radially under the influence of centrifugal force such that the free end maintains contact with the rear of the tapered bore, which also radially expands under the influence of centrifugal force during ~~the~~ rotation.

[0013] The shank of the tool holder can be comprised of inner member and an outer sleeve member disposed over the inner member. The sleeve member has the tapered outer surface corresponding to the tapered bore of the spindle, and also includes end portions adjacent one or both of the front and rear contact portions. The end portions comprise the circular cantilevers described above. The aforesaid ~~aforethe~~ annular recessed region is provided in the tapered outer surface of the sleeve member, intermediate the front and rear contact portions of the shank.

[0032] Some specific examples of prior art face-taper contact steep taper tool holders are the DAISHOWA SEIKI BIG-PLUS™ ~~Daishowa Seiki Big Plus™~~, SHOWA D-F-C™ ~~Showa D-F-C™~~, and NIKKEN 3LOCK™ ~~Nikken 3Lock™~~. The BIG-PLUS™ ~~Big Plus™~~ tool holder 33, shown only generally in FIGS. 2a and 2b, is made to very tight dimensional tolerances such that simultaneous face and taper contact is produced– but there is only minimal interference between the tapers due to high component stiffness and the relatively low retention force. However, as shown in FIG. 2a, the taper contact is still primarily at the front gauge line, due to tolerancing of the respective tapers. Because of the face contact, 'rocking' is greatly reduced for the tool holder 33 when at rest. As this tool holder 33 is rotated at high speeds, the spindle taper diameter once again increases faster than the tool holder taper diameter, as shown in FIG. 2b. Because the tool holder 33 can not be drawn into the spindle 28 due to the face contact, a radial gap is produced between the tapers. This gap allows radial motion of the tool holder 33, resulting in loss of accuracy and balance. However, axial positioning is maintained by the face contact.

[0033] Referring now to FIGS. 3a and 3b, the SHOWA D-F-C™ ~~Showa D-F-C™~~ steep taper tool holder 36 has a spring-loaded tapered sleeve 38 on a cylindrical shank 40, combined with face contact. The intended purpose of the sleeve 38 is to move axially as the rotational speed increases so that the tool holder 33 stays in contact with the spindle 28. The use of the moveable sleeve 38 also eases the tolerancing requirements that are more critical on the BIG-PLUS™ ~~Big Plus™~~ tool holder. At rest, the main contact is still at the front gauge line, as shown in FIG. 3a. As the D-F-C™ tool holder is rotated at high speeds, the sleeve 38 moves axially to stay in contact with the spindle 28, as shown in FIG. 3b. However, the sleeve 38

also increases in diameter due to the centrifugal forces. Therefore, even though the sleeve 38 maintains contact with the spindle 28, the sleeve 38 can lose contact with the tool holder shank 40, resulting in a radial gap. As a result, the situation is similar to the BIG-PLUS™ ~~Big-Plus™~~ tool holder in that the tool holder 33 can move radially, producing unbalance and loss of accuracy.

[0034] Referring now to FIGS. 4a and 4b, the NIKKEN 3LOCK™ ~~Nikken 3Lock™~~ tool holder 43 is similar to the D-F-C™ tool holder 33, except the sleeve 46 is split such that it can flex circumferentially and therefore change diameter. The flexible sleeve 46 overcomes one limitation of the D-F-C™ tool holder, since the sleeve 46 can now stay in simultaneous contact with the tool holder shank 48 and the spindle taper as the spindle taper diameter is changing. However, the sleeve 46 still cannot adapt to the changing taper angle, such that contact is still localized at either the front or rear of the taper, as shown in FIG. 4b. Also, the presence of friction limits the ability of the sleeve 46 to always maintain solid contact between tool holder 43 and taper– some 'slop' is bound to exist, reducing tool holder stiffness. The split sleeve 46 can also be prone to contamination problems since any material that is present between the sleeve 46 and the tool holder shank 48 will reduce the design's effectiveness, and sealing the design can be impractical.